

REMARKS

Reconsideration of this application as amended is requested. By this amendment Applicants have amended the drawing Fig. 3, have amended the specification at page 2 to delete an obviously extraneous word, and have amended claims 11, 13 and 14. Claims 1-15 remain in the case.

The Examiner objected to the drawing because it did not include "reconstructor 42", which is mentioned at page 6, line 6 of the specification. Applicants have noted the omission from Fig. 3 of the drawing, and have amended Fig. 3 as indicated on the attached "Replacement Sheet" to include the "reconstructor 42" at the output of the receiver 40 prior to the inputs to decoder 38 and emulator 30, as is described in the specification at page 6. Thus the Examiner's objection to the drawing is now deemed to be moot.

The Examiner objected to claim 13, indicating that "an reference" should read "a reference". Applicants have amended claim 13 accordingly, thus rendering the Examiner's objection moot.

The Examiner rejected claims 14 and 15 under 35 U.S.C. 112, first paragraph as failing to comply with the written description requirement, citing that there is no support for the claimed limitation of "*a second means for decoding the packetized streaming media prior to transmission over the network to recover the streaming media from the source for input to the media quality analyzer*" in the specification. The Examiner recognizes that Appellants means to claim the decoder 38 of Fig. 2, but the specification states that "*the media for input to the reference input of the media quality analyzer 28 is derived via another decoder 38 from the original data packets from the server 16.*" Applicants submit that one of ordinary skill in the art

after seeing Fig. 2 would recognize that the packetized streaming media is decoded ***“prior to transmission over the network”***, as Fig. 2 shows the original data packets being output from the server 16 to the decoder 38. There could be some confusion, since claim 11 recites that the *“streaming media is transmitted from a source as packetized streaming media over a network”*, and what are decoded by the second decoding means are the original data packets before final formatting for transmission as the packetized streaming media. Therefore Applicants have amended claim 14 to recite ***“a second means for decoding **original data packets representing the streaming media in the packetized streaming media []** to recover the streaming media from the source for input to the media quality analyzer”*** to make it clear that it is the original data packets before formatting into a network protocol, such as UDP, for transmission over the network which are being decoded. This is deemed to be consistent with the written description and drawing Fig. 2. Thus claims 14 and 15 are deemed to be unambiguous and supported by the written description, and the Examiner’s rejection is now moot.

The Examiner rejected claims 11-15 under 35 U.S.C. 112, second paragraph, as being indefinite because there is no antecedent basis for “the statistical analysis” in claim 11. Applicants have amended claim 11 to recite “the analysis” for which there is antecedent basis, deleting the inadvertently added word “statistical.” Thus claims 11-15 are deemed to be definite, and the Examiner’s rejection is moot.

Finally the Examiner rejected claims 1-15 under 35 U.S.C. 103(a) as being unpatentable over Zhu et al (“Zhu”) in view of Wolf et al (“Wolf”). Applicants respectfully traverse this improper and nonobvious combination suggested by the Examiner having the benefit of hindsight. Zhu discloses a system that packetizes (server 502) a multimedia bit stream for transmission over a packet network 504 to a

remote site (multimedia player 506). The remote site includes a quality of service (QoS) manager 306 that detects lost packets and provides a retransmission request via a feedback message generator 314 to the server over a reverse channel of the network to retransmit such lost packets. Based on the retransmission requests the server may adjust the streaming rate and number of copies for retransmission to optimize end-to-end QoS. There is no measurement site disclosed in Zhu, as is recited by Applicants in claim 1. The retransmission requests in Zhu are used at the server to adjust rates and number of retransmission copies, not for measurement to determine at the measurement site the quality of the packetized streaming media received at the remote site as recited in claim 1. Zhu does not reconstruct at the measurement site the packetized streaming media as received at the remote site from the retransmission requests for QoS analysis.


Wolf does not supply this deficiency in Zhu of reconstructing at a measurement site the packetized streaming media as received at the remote site from analysis performed at the remote site, as Wolf is dealing with streaming video and not packetized streaming media. Wolf teaches using two instruments – one for capturing and processing source video and the other for capturing and processing destination (remote) video. The video format converters essentially convert an interlaced video to a progressive video for storage as a frame in the respective frame stores. Source and destination statistics are separately determined by the respective instruments to provide features to a quality processor to compute human perception-based quality parameters. Essentially Wolf discloses something akin to the quality analyzer 28 shown by Applicants in Figs. 1-3, i.e., Wolf processes the decoded video/audio for comparison with the source video/audio. Wolf does not analyze reconstructed packetized streaming media that represents the packetized streaming media received at the remote site.

There is no suggestion in Zhu for making any measurements except for determining lost packets so they may be retransmitted. For streaming media which is packetized in the UDP protocol, there is no retransmission possible as there are no retransmission requests involved, i.e., the data packets are connectionless. Combining Wolf with Zhu would mean having two instruments, one connected to receive the multimedia bit stream (source video) prior to the server and the other to receive the output from the bit stream buffer 318 (decoded or destination video) at the remote site (player), which bit streams would be separately analyzed to obtain features which are then processed by the quality processor. Even with this combination there is no reconstruction of the received packetized streaming media from the analysis performed at the remote site, which reconstructed received packetized streaming media is then analyzed for quality of the received packetized streaming media. Thus independent claims 1, 9 and 11 which include this reconstruction feature together with dependent claims 2-8, 10 and 12-15 are deemed to be allowable as being nonobvious to one of ordinary skill in the art over Zhu in view of Wolf.

In view of the foregoing amendment and remarks allowance of claims 1-15 is urged, and such action and the issuance of this case are requested.

Respectfully submitted,

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